

[FIG. 2]

120: PANEL CONTROL UNIT
 125: OPERATING PANEL
 130: READING CONTROL UNIT
 131: A/D CONVERTER
 135: CCD IMAGE SENSOR
 140: IMAGE PROCESSING UNIT
 145: DATA ABNORMALITY DETECTING UNIT
 150: MEMORY CONTROL UNIT
 160: COMMUNICATION CONTROL UNIT
 161: CODEC UNIT
 165: MODEM
 170: RECORDING CONTROL UNIT
 175: RECORDING UNIT

[FIG. 3]

136: PHOTODIODE
 137: ANALOG SHIFT REGISTER
 138: SHIFT GATE
 139: AMP

[FIG. 4]

155a: IMAGE DATA STORAGE AREA
 155b: DETERMINATION VALUE STORAGE AREA
 155c: WORK AREA

[FIG. 5]

PIXEL DATA
 SELECT SIGNAL
 UPDATE DATA
 STORED MINIMUM VALUE
 UPDATE TIMING SIGNAL
 READ-OUT MINIMUM DATA
 141a: COMPARATOR
 141b: SELECTOR
 141c: MINIMUM VALUE REGISTER

[FIG. 6]

PIXEL DATA
 SELECT SIGNAL
 UPDATE DATA
 STORED MAXIMUM VALUE
 UPDATE TIMING SIGNAL
 READ-OUT MAXIMUM DATA
 142a: COMPARATOR

142b: SELECTOR
142c: MAXIMUM VALUE REGISTER

[FIG. 7]

IMAGE PROCESSING

131: A/D CONVERTER
135: CCD IMAGE SENSOR
145: DATA ABNORMALITY DETECTING UNIT
161: CODEC
165: MODEM
175: RECORDING UNIT
210: BLACK LEVEL CORRECTION
220: SHADING CORRECTION
230: VARIOUS KINDS OF IMAGE PROCESSING
240: BINARIZATION
250: DATA ABNORMALITY ANNOUNCING UNIT (ALARM MESSAGE OR THE LIKE)

[FIG. 8]

START

S11: SET VARIOUS INITIAL VALUES.
S12: START READING OF ONE PAGE.
S13: UPDATE STORAGE VALUES OF MAXIMUM VALUE REGISTER AND MINIMUM VALUE REGISTER.
S15: COMPLETION OF PAGE READING
S16: (VALUE OF MAXIMUM VALUE REGISTER) < (BLACK DETERMINATION VALUE) ?
S17: GIVE ALL-BLACK ALARM.
S18: SHOULD TRANSMISSION BE CANCELED?
S20: TERMINATION
S21: SHOULD ORIGINAL BE READ AGAIN AFTER CHANGING SETTINGS TO REDUCE DENSITY?
S22: CANCELLATION OF TRANSMISSION
S23: CHANGE BINARIZATION THRESHOLD VALUE, WHITE DETERMINATION VALUE, AND BLACK DETERMINATION VALUE.
S25: (VALUE OF MINIMUM VALUE REGISTER) > (WHITE DETERMINATION VALUE) ?
S26: NORMAL TERMINATION
S27: GIVE ALL-WHITE ALARM.
S28: SHOULD TRANSMISSION BE CANCELED?
S30: TERMINATION
S31: SHOULD ORIGINAL BE READ AGAIN AFTER CHANGING SETTINGS TO REDUCE DENSITY?
S32: CANCELLATION OF TRANSMISSION
S33: CHANGE BINARIZATION THRESHOLD VALUE, WHITE DETERMINATION VALUE, AND BLACK DETERMINATION VALUE.

[FIG. 9, 10, 11]

(WHITE)

WHITE DETERMINATION VALUE
BINARIZATION THRESHOLD VALUE

BLACK DETERMINATION VALUE

(BLACK)

F: MAXIMUM VALUE

G: MINIMUM VALUE

H: BINARIZATION RESULT

[FIG. 12]

START

S51: SET VARIOUS INITIAL VALUES.

S52: START READING OF ONE PAGE.

S53: UPDATE STORAGE VALUES OF MAXIMUM VALUE REGISTER AND MINIMUM VALUE REGISTER.

S55: COMPLETION OF PAGE READING

S56: $\{ (\text{VALUE OF MAXIMUM VALUE REGISTER}) - (\text{VALUE OF MINIMUM VALUE REGISTER}) \} < (\text{AMPLITUDE DETERMINATION VALUE})$?

S57: NORMAL TERMINATION

S58: GIVE ABNORMALITY ALARM.

S60: SHOULD TRANSMISSION BE CANCELED?

S61: TERMINATION

S62: CANCELLATION OF TRANSMISSION

[FIG. 13, 14]

A: (WHITE)

B: BINARIZATION THRESHOLD VALUE

C: (BLACK)

D: MAXIMUM VALUE

E: MINIMUM VALUE

F: BINARIZATION RESULT

[FIG. 15]

1-LINE/1-OUTPUT DEVICE

EFFECTIVE READING RANGE

[FIG. 16]

1-LINE/3-OUTPUT DEVICE

EFFECTIVE READING RANGE

[FIG. 17]

3-LINE/3-OUTPUT DEVICE